FORT BRAGG
NORTH CAROLINA

US Army Corps
of Engineers
Savannah District

Solicitation Number
DACA21-02-R-0047
16TH MILITARY POLICE BRIGADE BARRACKS COMPLEX
FY-03, Line Item 41631
Volume II of II – Appendices E through L of Section 01010 and Sections 01012 through 13280
January 2003

PHASE TWO OF TWO PHASE DESIGN/BUILD SUBMITTAL PROCEDURE

THIS SOLICITATION IS UNRESTRICTED PURSUANT TO THE "BUSINESS OPPORTUNITY DEVELOPMENT REFORM ACT OF 1988" (PUBLIC LAW 100-656)

U.S. ARMY ENGINEER DISTRICT, SAVANNAH
CORPS OF ENGINEERS
100 WEST OGLETHORPE AVENUE
SAVANNAH, GEORGIA 31401-3640

U.S. Army Corps
of Engineers
Savannah District

U.S. ARMY CORPS OF ENGINEERS
ENVIRONMENTAL & MATERIALS UNIT
200 NORTH COBB PARKWAY
BUILDING 400, SUITE 404
MARIETTA, GA 30062

HAZARDOUS BUILDING MATERIAL REPORT

BUILDING NUMBER 5316
FORT BRAGG, NORTH CAROLINA

*4

DELETED

(This building has been demolished)

(Revised by Amendment No. 0004)

U.S. Army Corps
of Engineers
Savannah District

U.S. ARMY CORPS OF ENGINEERS
ENVIRONMENTAL & MATERIALS UNIT
200 NORTH COBB PARKWAY
BUILDING 400, SUITE 404
MARIETTA, GA 30062

HAZARDOUS BUILDING MATERIAL REPORT

INCLUDING ASBESTOS

BUILDING 5420
FORT BRAGG, NORTH CAROLINA

HAZARDOUS BUILDING MATERIAL REPORT
Ft. BRAGG, NORTH CAROLINA
BUILDING 5420

INTRODUCTION

1. This report documents the hazardous building material survey of Building 5420 associated with the 16th MP Brigade complex project at Ft. Bragg, North Carolina conducted on 13 March 2002 by USACE Savannah District employees Tim Jones and Jack Ford. This survey was conducted in general accordance with the Statement of Services developed by Ray Willingham, USACE Savannah District.

2. The survey consists of a count of florescent and metal halide lights, a search for mercury containing equipment, a search for lead building components, a search for evidence of past or present underground storage tanks and a search for any other hazardous building materials. Two asbestos samples were taken from the roof for analysis and results are included in this report.

3. Building 5420 was built in 1984 and is of concrete masonry block construction with a concrete floor slab and a wood decked and shingled roof. No physical sampling of suspect hazardous components was performed, other than the two suspect asbestos samples, and only a visual counting was performed.

4. The asbestos bulk samples were analyzed by Hygeia Laboratories, Inc. Hygeia is accredited by the National Voluntary Laboratory Accredited Program (NVLAP Accreditation sponsored by the National Institute of Standards and Technology (NIST)). The sample was analyzed by the accepted method of polarized light microscopy (PLM) using EPA's "Method for the Determination of Asbestos in Bulk Building Materials", EPA/600/R-93/116. Hygeia's analytical report is included in Appendix 1 and their NVLAP accreditation is in the Certifications section.

SUMMARY

5. The florescent and metal halide light count results are presented in Table 1.

6. No lead building components were located in Building 5420.

7. No mercury-containing equipment was located in Building 5420.

8. Two samples were taken from the roof for asbestos analysis and found to be non-asbestos containing. One sample was the shingles and the other was the felt paper under the shingles. No other suspect asbestos-containing materials were located. The sampling location is indicated on the Floor Plan, which follows.

Prepared by: _____
TIMOTHY A. JONES

Tables

TABLE 1
BUILDING 5420
FLORESCENT LIGHT FIXTURES

AREA IDENTIFICATION	# & TYPE LIGHTS PRESENT	DESCRIPTION OF LIGHTS
Interior	1	4 foot long, 1 bulb florescent fixtures

Floor Plan
(See file 5420FloorPlan.dgn)

Appendix 1

Hygeia Laboratories Inc.
1300 Williams Drive, Suite A
Marietta, GA 30066
(770) 514-6933

PLM Analysis Summary

Hygeia Project Number: A0203005

Client Project Number/Name: 7451 / Fort Bragg - Building 5420

Analyzed: 3/18/2002 **by** JC

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5420-R-1	A0203005-01	Black	Fibrous	No							20%		80%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5420-R-2	A0203005-02	Black	Fibrous	No						70%			30%	

Comment: No Asbestos Detected.

abbreviations:

Chr. = chrysotile
Am. = amosite
Cro. = crocidolite
An. = anthophyllite
T/A = tremolite/actinolite

cell = cellulose
glass = fibrous glass
syn = synthetic
sty = styrene foam
det = detected

per = perlite
ver = vermiculite
MF = Mineral filler
B/F = Binder / filler
NAD = No asbestos detected

OF = Other Fibers
ONF = Other Non-Fibers
Cons = Consolidated

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project: **Ft. Bragg Bldg. 5420**	EMU Job No.: 7451
Samplers: Tim Jones, Jack Ford	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS / NOTES
3/13/02	5420-R-1	43400	Roof Shingle
3/13/02	5420-R-2	43401	Roof Felt

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	3-18-02	1205		3-18-02	12:05

Comments:

Certifications

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA / AHERA (TSCA Title II) Approved Accreditation
and NESHAP Regulations Training

Asbestos in Buildings: Inspection and Assessment

February 10-12, 1997
Course Date

2360
Certificate Number

February 12, 1997
Examination Date

February 11, 1998
Expiration Date

William H. Spain - Course Director

Rachel G. McCain - Exam Administrator

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation
and NESHAP Regulations Training

Asbestos in Buildings: Inspector Refresher

February 26, 2002
Course Date

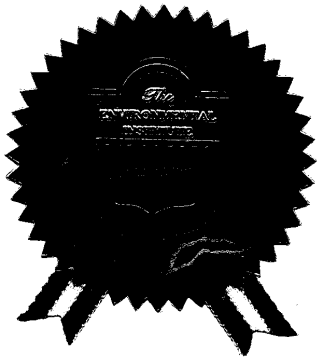
7283
Certificate Number

February 26, 2002
Examination Date

February 25, 2003
Expiration Date

Thomas G. Laubenthal - Course Director

Rachel G. McCain - Exam Administrator



TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

1 April 2002

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

HYGEIA LABORATORIES, INC.

MARIETTA, GA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

March 31, 2003

Effective through

David F. Alderman

For the National Institute of Standards and Technology

NVLAP Lab Code: 102087-0

NVLAP-01C (11-95)

CESAS-EN-GGe

National Institute of Standards and Technology **NVLAP®** National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Scope of Accreditation

BULK ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 102087-0**

HYGEIA LABORATORIES, INC.
1300 Williams Drive, Suite A
Marietta, GA 30066-6299
Mr. Clayton Call
Phone: 770-514-6933 Fax: 770-514-6966
E-Mail: call67@atc-enviro.com

NVLAP Code	*Designation*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

March 31, 2003
Effective through

David F. Alderman
For the National Institute of Standards and Technology

NVLAP-01S (11-95)

U.S. Army Corps
of Engineers
Savannah District

U.S. ARMY CORPS OF ENGINEERS
ENVIRONMENTAL & MATERIALS UNIT
200 NORTH COBB PARKWAY
BUILDING 400, SUITE 404
MARIETTA, GA 30062

ASBESTOS SURVEY

BUILDING NO. 5517
FORT BRAGG, NORTH CAROLINA

ASBESTOS INSPECTION REPORT
FORT BRAGG, NORTH CAROLINA
BUILDING NUMBER 5517

INTRODUCTION

1. This report documents the asbestos inspection and survey of Building No. 5517 at Fort Bragg, North Carolina conducted on March 12 to 14, 2002 by USACE Savannah District employees Tim Jones and Jack Ford. The survey was conducted in general accordance with the regulatory guidelines in the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763 Subpart E Sections 763.80-763.88) and "Guidance for Controlling Asbestos-Containing Materials in Buildings" (Purple Book) (EPA publication number 560/5-85-024). Although not required by the AHERA guidelines, roof and other exterior miscellaneous materials were also inspected and sampled.

2. Building No. 5517 was built in 1941 and is a single story structure of wood frame construction with aluminum siding and soffit covering the old wood exterior. The floor is concrete slab on grade and the roof is wood frame with asphalt shingles. Building 5517 originally housed the post bakery, but has been renovated many times and now contains offices and storage areas.

3. All accessible areas of Building No. 5517 were visually inspected for suspected Asbestos Containing Materials (ACM) by an accredited inspector. Bulk samples of all suspected ACM's were collected. Samples were taken from inconspicuous locations when possible. This report details ACM as identified at the time of inspection only.

4. The bulk samples were analyzed by Hygeia Laboratories, Inc. Hygeia is accredited by the National Voluntary Laboratory Accredited Program (NVLAP Accreditation sponsored by the National Institute of Standards and Technology (NIST)). The samples were analyzed by the accepted method of polarized light microscopy (PLM) using EPA's "Method for the Determination of Asbestos in Bulk Building Materials", EPA/600/R-93/116. Hygeia's analytical report is included in Appendix 1 and their NVLAP accreditation is in the Certifications section.

5. In compliance with the AHERA regulations, material is considered an Asbestos Containing Material when it contains greater than 1 (one) percent asbestos. Likewise, in this report, any material containing concentrations greater than 1 percent asbestos will be considered "positive". A narrative discussion of the AHERA ACM types (i.e., thermal systems insulation, miscellaneous and surfacing materials) found in Building No. 5517 is included in this report when relevant. Bulk sample information appears on Table 1. Estimated quantities of individual asbestos containing materials appear on Table 2. Material

characterization of samples identified as asbestos containing appears as Table 3. Photographs of the positive materials, when available, appear as Figures. The specific location where each bulk sample was obtained is shown on the building floor plans, which appear as Plates. Positive ACM samples are highlighted on the floor plan Plates and, where possible, locations of similar positive ACM are identified. It is reasonable to assume that all materials similar to those testing positive, also contain positive amounts of asbestos and should be treated as such.

DISCUSSION

6. **Thermal Systems Insulation (TSI)** – TSI is insulation material applied to pipes, fittings, boilers, tanks, ducts, or to other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes (Refer to Tables 1-3 and Plate 1 for specific information and sample locations).

   TSI throughout building 5517 is fiberglass with the exception of one remnant on a section of steam piping at a unit heater in the ceiling of an office at the southwest end of the building. See plate #1, sample 58PR for specific location.

7. **Miscellaneous Materials** – Miscellaneous materials include building material on structural components, structural members or fixtures, such as floor and ceiling tiles, and do not include surfacing or TSI.

   In the past, there were a great number of miscellaneous building materials that had asbestos fibers added to them during the manufacturing process to increase durability and fireproofing qualities. The following suspect miscellaneous materials were sampled at Building No. 5517 and found to contain asbestos.

   Floor Materials – (Refer to Tables 1-3 and Plates 2 & 5 for specific information and sample locations).

   Twenty samples of floor covering were analyzed. Of those eight were determined to be asbestos containing. The positive materials are as follows; gray and tan sheet vinyl floor covering, green floor tile (lower layer), 12” X 12” white with black accents floor tile, 12” X 12” black with white accents floor tile, 12” X 12” white with gray accents floor tile and 12” X 12” gray with brown accents floor tile.

   Roofing Materials – (Refer to Tables 1-3 and Plate 4 for specific information and sample locations).

   Troweled on roofing cement used as patching and flashing material was found to contain positive amounts of asbestos.

Caulking Materials - (Refer to Tables 1-3 and Plate 3 for specific information and sample locations).

Caulking material between the brick chimney and siding was found to be asbestos containing.

Asbestos Cement Board - (Refer to Tables 1-3 and Plates 2, 6 & 7 for specific information and sample locations).

Asbestos cement board is used as wall covering in the small shop room east of the warehouse area and as ceiling material above the suspended ceiling in the storage room next to the shop.

Ceiling Tiles - (Refer to Tables 1-3 and Plates 2 & 6 for specific information and sample locations).

Pink colored 2' X 2' foil backed suspended ceiling tiles in the conference room contains positive amounts of asbestos. Spare tile may be found in the small closed in the conference room.

8. **Surfacing** – Surfacing material is friable material that is sprayed on, troweled on, or otherwise applied to surfaces for decorative or other purposes.

   No samples of surfacing material were found to be asbestos containing.

Summary

9. In summary, the following materials in building 5517 were found to contain or are assumed to contain asbestos:

   Floor tiles in many areas of the building contain asbestos (see floor plan plates).

   Troweled on roofing cement used for flashing and patching contains positive amounts of asbestos.

   Caulking material at the junction of siding and masonry brick chimney contains asbestos. This material may be found at other areas under newer aluminum siding.

   Asbestos cement board used as wall and ceiling covering in two rooms contains asbestos.

   Pink colored 2' X 2' foil backed ceiling tile in one room contains positive amounts of asbestos.

   TSI pipe run insulation remnant at one steam unit heater contains asbestos.

Prepared by: _____
TIMOTHY A. JONES

Tables

Table 1 Suspect ACM Samples
Table 2 ACM Quantity Summary
Table 3 Material Characterization and Assessment

TABLE 1
SUSPECT ACM SAMPLES

FIELD ID	DESCRIPTION	LOCATION	ASBESTOS TYPE(%)
5517-R-1	Roof shingle, single layer roof	Roof field	None
5517-R-2	Roofing felt	Roof field, under sample 5517-R-1	None
5517-R-3	Rolled roofing, poor condition	Roof field, lower roof on east end of building	None
5517-R-4	Roofing felt	Roof field, under sample 5517-R-3	None
5517-R-5	**Roof patching cement**	**At junction of lower roof and wall section at east end of building**	**10% chrysotile**
5517-R-6	Rolled roofing, good condition, appears to be a patch section	Roof field, lower roof on east end of building	None
5517-R-7	Roofing felt	Roof field, lower roof on east end of building, under sample 5517-R-6	None
5517-R-8	**Roof patching cement**	**Around plumbing vent pipe lead flashing at roof at lower roof on east end of building**	**8% chrysotile**
5517-R-9	**Roof patching cement**	**On metal square vents through roof at joint with roof field**	**15% chrysotile**
5517-R-10	**Roof patching cement**	**At flashings at brick chimneys**	**5% chrysotile**
5517-R-11	Rolled roofing, new looking	On boiler room roof by chimney	None
5517-R-12	Roofing felt	On boiler room roof by chimney, under sample 5517-R-11	None
5517-R-13	Roof patching cement	On metal square vents through roof at joint with roof field, newer looking	None
5517-R-14	Roof shingle, upper layer roof	Lower roof section on south east section of building	None
5517-R-15	Roofing felt	Lower roof section on south east section of building, under sample 5517-R-14	None
5517-R-16	Roof shingle or rolled roofing	Lower roof section on south east section of building, under sample 5517-R-15	None
5517-R-17	Built up roof membrane	Lower roof section on south east section of building, under sample 5517-R-16	None
5517-R-18	**Roof patching cement, silver coated**	**At flashings at brick chimneys**	**10% chrysotile**
5517-R-19	Roof shingle, single layer roof	Main roof field	None
FIELD ID	DESCRIPTION	LOCATION	ASBESTOS TYPE(%)

Samples testing positive for asbestos in **BOLD** print

TABLE 1
SUSPECT ACM SAMPLES

FIELD ID	DESCRIPTION	LOCATION	ASBESTOS TYPE(%)
5517-R-20	Roofing felt	Main roof field, under sample 5517-R-19	None
5517-R-21	Rolled roofing	Vertical siding on dormer	None
5517-R-22	Felt	Under vertical siding on dormer	None
5517-R-23	Built up roof membrane	Lower roof section on south east section of building, under shingle roof	None
5517-E-24	Window frame caulking material	Exterior of window frame at north end of building, around newer looking aluminum window	None
5517-E-25	Window glazing compound	On window panes of old windows in storage shed lean to at north end of building	None
5517-E-26	Felt paper	Attached to wood framing studs under old wood clap board siding, mechanical room	None
5517-M-27	Gypsum board wall covering	Mechanical room walls	None
5517-M-28	Gypsum board wall covering	Mechanical room walls, around boiler vent through wall	None
5517-E-29	**Caulking material**	**At junction of brick chimney and siding**	**10% chrysotile**
5517-1-30	Cellulose composite board wall covering	Warehouse area	None
5517-1-31	**Asbestos cement board wall covering**	**Walls of shop room**	**60% chrysotile**
5517-1-32	Cellulose composite board wall covering	Warehouse area	None
5517-1-33	Cellulose composite board wall covering	Store room	None
5517-1-34	**Grey and tan sheet vinyl flooring**	**Store room**	**20% chrysotile**
5517-1-35	Cloth duct tape	Unit heater in ceiling of store room	None
5517-1-36	12" X 12" tan with brown accents floor tile	Store room above basement	None
5517-1-37	**Asbestos cement board ceiling covering**	**Store room, above suspended ceiling**	**60% chrysotile**
5517-1-38	Gypsum board wall covering	Store room, under wood paneling	None
5517-1-39	2' X 2' random pattern ceiling tile	Store room suspended ceiling	None
5517-1-40	Heat shield material	Applied to wood framing around metal vents through roof in warehouse area	None
5517-1-41	Heat shield material	Applied to wood framing around metal vents through roof in warehouse area	None

Samples testing positive for asbestos in **BOLD** print

TABLE 1
SUSPECT ACM SAMPLES

5517-1-42	12" X 12" black floor tile	Upper layer, office area by warehouse	None
5517-1-43	Brown floor covering	Lower layer, office area by warehouse, under sample 5517-1-42	None
5517-1-44	12" X 12" black with white accents floor tile	Office area by warehouse	<1% chrysotile in mastic only, tile NAD
5517-1-45	12" X 12" tan with gray accents floor tile	Women's restroom near warehouse	None
5517-1-46	**Green floor tile**	**Women's restroom near warehouse, under sample 5517-1-45**	**Tile 4% chrysotile, mastic NAD**
5517-1-47	2' X 4' random pattern suspended ceiling tile	Women's restroom near warehouse	None
5517-1-48	Textured surfacing material	On drywall under wood paneling in offices near warehouse area	None
5517-1-49	2' X 4' random pattern suspended ceiling tile	Office area near warehouse	None
5517-1-50	12" X 12" brown with tan accents floor tile	Men's restroom near warehouse area	None
5517-1-51	2' X 4' random pattern suspended ceiling tile	Men's restroom near warehouse area	None
5517-1-52	Black floor tile	Under plywood and brown with tan floor tile in men's restroom near warehouse	Tile NAD, mastic <I% chrysotile
5517-1-53	**12" X 12" white with black accents floor tile**	**Front entry area on west side of building**	**Tile 2% chrysotile, mastic NAD**
5517-1-54	12" X 12" black with white accents floor tile	Front entry area on west side of building	Tile 2% chrysotile, mastic NAD
5517-1-55	Textured wall surfacing material, green painted	Interior side of exterior wall, west side of building under wood paneling, near entry door.	None
5517-1-56	**12" X 12" white with gray accents floor tile**	**In corridor in front of Procurement Chief's office**	**2% chrysotile**
FIELD ID	DESCRIPTION	LOCATION	ASBESTOS TYPE(%)
5517-1-57	2' X 4' random pattern suspended ceiling tile	Corridor, Typical for most of building	None
5517-1-58PR	**TSI pipe run remnant**	**Office ceiling on steam pipe at unit south west end of building**	**60% chrysotile**
5517-1-59	Surfacing material on underside of stainless steel kitchen sink	Break room	None

Samples testing positive for asbestos in **BOLD** print

TABLE 1
SUSPECT ACM SAMPLES

5517-1-60	12" X 12" tan with brown accents floor tile	Patching tiles in break room and corridor at entry to break room	None
5517-1-61	**12" X 12" gray with brown accents floor tile and mastic**	**Restrooms at break room**	**Overall <1% chrysotile, Tile NAD, mastic 7% chrysotile**
5517-1-62	12" X 12" tan with brown accents floor tile	Corridor in front of Tech Services conference room	None
5517-1-63	12" X 12" black floor tile	Corridor in front of Tech Services conference room	None
5517-1-64	12" X 12" black floor tile	Maintenance Tech Services Chief's office, under carpet	None
5517-1-65	Green, cloth backed sheet vinyl flooring	Tech Services Operations and Planning office	None
5517-1-66	Gypsum board ceiling	Corridor, above suspended ceiling	None
5517-1-67	Gypsum board wall covering with sand texture surfacing, green painted	Corridor, at north east entry door	None
5517-1-68	**2' X 2' foil backed pink random pattern suspended ceiling tile**	**Conference room**	**3% chrysotile**
5517-1-69	**12" X 12" black with white accents floor tile**	**Office, at north west end of building**	**3% chrysotile**
5517-1-70	**Grey and tan sheet vinyl flooring**	**Office, at north east end of building**	**25% chrysotile**
5517-1-71	Drywall joint compound with sand textured surfacing, green painted	Corridor, at north east entry door	<1% chrysotile
5517-1-72	Gypsum board wall covering with sand textured surfacing, green painted	Corridor, at north east entry door	None
5517-1-73	Gypsum board wall covering with sand textured surfacing, tan painted	Corridor, at north east entry door	None
FIELD ID	DESCRIPTION	LOCATION	ASBESTOS TYPE(%)
5517-1-74	Drywall joint compound	Corridor at Maintenance Tech Services Chief's office	None
5517-1-75	Gypsum board wall covering	Corridor at Maintenance Tech Services Chief's office	None
5517-1-76	Fiberboard ceiling material	Office at south west end of building, above suspended ceiling	None
5517-1-77	Gypsum board wall covering and joint compound	Ladies restroom	Drywall NAD, joint compound <1% chrysotile
5517-1-78	Drywall joint compound	Warehouse area, west wall	None

Samples testing positive for asbestos in **BOLD** print

TABLE 2

ACM QUANTITY SUMMARY
Ft. Bragg Building 5517

Material Descriptions	Units	Area Descriptions													
		Storerooms	Procurement	South West Offices	Corridor, Southern Half	Corridor, northern Half	Warehouse Area Ladie's R	Recreation Services	Conference Room	Break Room	South East Men's RR	South East Ladie's RR	Exterior	Roof	Total
Floorcovering	S.F.	50	306	175	410		90	1290			64	180			2565
Caulking Material	L.F.												20		20
Asbestos Cement Board Wall and Ceiling Covering	S.F.	620													620
TSI Pipe Run 5" OD	L.F.			3											3
2' X 2' Random Pattern Ceiling Tile, Foil Backed, Pink	S.F.								350						350
Roofing Cement	S.F.														450

S.F. = Square Foot L.F. = Linear Foot Ea. = Each

All values are estimates

MATERIAL CHARACTERIZATION AND ASSESSMENT
BUILDING 5517 Ft. BRAGG NORTH CAROLINA

MATERIAL		CHARACTERISTICS			ASSESSMENT	
Type	**Description**	**Asbestos yes/no/ assumed**	**Quantity (If ACM)**	**Friable Non-Friable**	**Condition**	**Disturbance Potential**
Miscellaneous	Vinyl floor covering & mastic	Yes 2-25%	2575	Non-friable	Damaged	Potential damage from foot traffic, moving equipment ect.
Miscellaneous	Caulking material	Yes 10%	20 L.F.	Non-friable	Significantly 'Damaged	High potential for disturbance due to accessibility to general public
TSI	TSI pipe run insulation	Yes 60%	3 L. F.	Friable	Significantly 'Damaged	Moderate potential for disturbance
Miscellaneous	Asbestos cement board	Yes 60%	620 S.F.	Non-friable	Damaged	Low
Miscellaneous	Roofing cement	Yes 5-15%	450 S.F.	Non-friable	Good	Low
Miscellaneous	2' X 2' Ceiling tile	Yes 3%	350 S. F.	Friable	Good	Low

S.F. = Square Foot L.F. = Linear Foot Ea. = Each

Plates

(See Contract Drawings)

Plate 1	Plate 1.dgn	Room designations
Plate 2	Plate 2.dgn	First floor sample locations
Plate 3	Plate 3.dgn	Exterior sample locations
Plate 4	Plate 4.dgn	Roof sample locations
Plate 5	Plate 5.dgn	Asbestos containing flooring materials locations
Plate 6	Plate 6.dgn	Asbestos containing ceiling materials locations
Plate 7	Plate 7.dgn	Asbestos containing wall covering materials locations

Figures

Figure 1 Floor Tile
Figure 2 Caulking Material
Figure 3 ACM TSI
Figure 4 Roofing Cement

Figure 1. Both black with white highlights and white with black highlights 12” X 12” floor tiles contain positive amounts of asbestos.

Figure 2. Caulking material at brick chimney contains asbestos.

Figure 3. TSI pipe insulation at unit heater in ceiling of office contains asbestos.

Figure 4. Roofing cement used as flashing and patching at metal roof vents and brick chimneys as well as junctions of roof sections contains asbestos.

Appendix 1

HYGEIA LABORATORIES, INC.
1300 Williams Drive, Suite A - Marietta, Georgia 30066-6299 - (770) 514-6933, FAX (770) 514-6966

US Army Corp of Engineers
Environmental & Materials Unit
200 North Cobb Parkway
Bldg. 400, Ste. 404
Marietta, GA 30062

3/27/2002

Subject:
Hygeia Project Number: A0203023
Client Project Number/Name: 7454 /Fort Bragg - Building 5517

Dear Mr. Tim Jones:

Enclosed are the analytical results of bulk samples submitted by you to this laboratory on 3/18/2002. All analyses were performed by polarized light microscopy (PLM) in accordance with the EPA method as defined in Perkins and Harvey, July 1993, "Methods for the Determination of Asbestos in Bulk Materials" 61pp. (EPA/600/R-93/116). The reported percentages are volume estimates obtained by calibrated visual estimation. The results in this report apply only to the items tested.

The EPA defines an asbestos containing material (ACM) as a material that is reported to contain greater than one percent asbestos. HYGEIA is only responsible for the accuracy of the analytical results provided in this report and cannot be held responsible for the errors resulting from improper sample collection techniques. This report may not be used to claim product endorsement by NVLAP or any other U.S. Government agency.

For nonhomogeneous samples, each layer was analyzed separately and the results combined to form the reported value except where otherwise noted. Vinyl floor tile samples with negative results by PLM should be submitted for confirmation by transmission electron microscopy (TEM). Friable samples containing less than 10% asbestos as determined by PLM may be resubmitted for point counting at your discretion.

Thank you for using our analytical services. HYGEIA Laboratories has been NVLAP accredited since 1988. Our current NVLAP code is 102087-0. We will keep a copy of this report on file for three years. We will dispose of your samples in 60 days unless you request that we return them. This report my be reproduced only in its entirety with the consent of Hygeia Laboratories, Inc. If you have any questions, please call us at (770) - 514-6933.

Sincerely,

Clayton Call
Asbestos Laboratory Manager

NVLAP# 102087-0
Texas Dept. of Health # 30-0232
Commonwealth of Virginia # 3333-000210

Hygeia Laboratories Inc.
1300 Williams Drive, Suite A
Marietta, GA 30066
(770) 514-6933

PLM Analysis Summary

Hygeia Project Number: A0203023
Client Project Number/Name: 7454 / Fort Bragg - Building 5517

Analyzed: 3/19/2002 by JC

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-1	A0203023-01	Black	Fibrous	No						10%			90%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-2	A0203023-02	Black	Fibrous	Yes						70%			30%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-3	A0203023-03	Black	Fibrous	No						55%			45%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-4	A0203023-04	Black	Fibrous	No						70%			30%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-5	A0203023-05	Black	Gummy	No	10%								90%	

Comment:

Hygeia Project Number: A0203023 **Page:** 2 of 16
Client Project Number/Name: 7454 / Fort Bragg - Building 5517 **Analyzed:** 3/19/2002 by JC

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-6	A0203023-06	Black	Fibrous	No						10%			90%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-7	A0203023-07	Black	Fibrous	No						70%			30%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-8	A0203023-08	Gray	Fibrous	No	8%					2%			90%	

Comment:

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-9	A0203023-09	Gray	Cons.	No	15%								85%	

Comment:

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-10	A0203023-10	Gray	Gummy	No	5%								95%	

Comment:

Hygeia Project Number: A0203023
Client Project Number/Name: 7454 / Fort Bragg - Building 5517

Analyzed: 3/19/2002 by WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-11	A0203023-11	Black	Cons.	No									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-12	A0203023-12	Black	Cons.	Yes						60%			40%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-13	A0203023-13	Black	Gummy	Yes						20%			80%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-14	A0203023-14	Black	Fibrous	Yes						40%			60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-15	A0203023-15	Black	Fibrous	Yes						70%			30%	

Comment: No Asbestos Detected.

Hygeia Project Number: A0203023 **Page:** 4 of 16
Client Project Number/Name: 7454 / Fort Bragg - Building 5517 **Analyzed:** 3/19/2002 by WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-16	A0203023-16	Brown	Fibrous	Yes						40%			60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-17	A0203023-17	Black	Fibrous	Yes						40%			60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-18	A0203023-18	Black	Fibrous	Yes	10%					5%			85%	

Comment:

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-19	A0203023-19	Black	Fibrous	No						30%			70%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-20	A0203023-20	Black	Fibrous	No						70%			30%	

Comment: No Asbestos Detected.

Hygeia Project Number: A0203023
Client Project Number/Name: 7454 / Fort Bragg - Building 5517

Analyzed: 3/19/2002 by JC

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-21	A0203023-21	Black	Fibrous	No						30%			70%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-22	A0203023-22	Black	Fibrous	No						70%			30%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-R-23	A0203023-23	Black	Fibrous	No						20%			80%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-E-24	A0203023-24	White	Caulky	No									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-E-25	A0203023-25	Tan	Cons.	Yes									100%	

Comment: No Asbestos Detected.

Hygeia Project Number: A0203023 **Page:** 6 of 16
Client Project Number/Name: 7454 / Fort Bragg - Building 5517 **Analyzed:** 3/19/2002 by JC

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-E-26	A0203023-26	Brown	Fibrous	Yes						70%			30%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-M-27	A0203023-27	Tan	Layered	No						10%			90%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-M-28	A0203023-28	Tan	Layered	No						10%	<1%		90%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-E-29	A0203023-29	Gray	Cons.	No	10%								90%	

Comment:

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-30	A0203023-30	White	Fibrous	No						70%			30%	

Comment: No Asbestos Detected.

Hygeia Project Number: A0203023 **Page:** 7 of 16
Client Project Number/Name: 7454 / Fort Bragg - Building 5517 **Analyzed:** 3/19/2002 by WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-31	A0203023-31	Multi	Cons.	Yes	60%								40%	

Comment:

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-32	A0203023-32	Gray	Fibrous	Yes						80%			20%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-33	A0203023-33	Multi	Fibrous	No						80%			20%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-34	A0203023-34	Multi	Fibrous	No	20%					10%			70%	

Comment:

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-35	A0203023-35	White	Fibrous	No						80%			20%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0203023 **Page:** 8 of 16
Client Project Number/Name: 7454 / Fort Bragg - Building 5517 **Analyzed:** 3/19/2002 by WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-36	A0203023-36	White	Cons.	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-37	A0203023-37	White	Cons.	Yes	60%					10%			30%	

Comment:

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-38	A0203023-38	Multi	Fibrous	No						40%			60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-39	A0203023-39	Gray	Fibrous	Yes						45%	20%		35%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-40	A0203023-40	Brown	Cons.	Yes						40%			60%	

Comment: No Asbestos Detected.

Hygeia Project Number: A0203023 **Page:** 9 of 16
Client Project Number/Name: 7454 / Fort Bragg - Building 5517 **Analyzed:** 3/19/2002 by JC

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-41	A0203023-41	Gray	Cons.	Yes							5%		95%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-42	A0203023-42	Gray	Gummy	No									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-43	A0203023-43	Green	Cons.	No									100%	

Comment: **Tile and mastic, NAD.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-44	A0203023-44	Black	Cons.	No	<1%								100%	

Comment: **Tile, NAD. Black mastic, <1% Chrysotile.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-45	A0203023-45	Tan	Cons.	No									100%	

Comment: **Tile and mastic, NAD.**

Hygeia Project Number: A0203023 **Page:** 10 of 16
Client Project Number/Name: 7454 / Fort Bragg - Building 5517 **Analyzed:** 3/19/2002 by JC

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-46	A0203023-46	Tan	Cons.	No	4%								96%	

Comment: Tile, 4% Chrysotile. Both maastics, NAD.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-47	A0203023-47	White	Fibrous	No						60%	5%		35%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-48	A0203023-48	White	Layered	No						10%			90%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-49	A0203023-49	White	Fibrous	No						60%	5%		35%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-1-50	A0203023-50	White	Cons.	No									100%	

Comment: Tile and mastic, NAD.

Hygeia Project Number: A0203023 **Page:** 11 of 16
Client Project Number/Name: 7454 / Fort Bragg - Building 5517 **Analyzed:** 3/19/2002 by JC

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-1-51	A0203023-51	White	Fibrous	No						60%	5%		35%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-52	A0203023-52	Black	Cons.	No	<1%								100%	

Comment: Tile, NAD. Mastic, <1% Chrysotile.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-53	A0203023-53	Tan	Cons.	No	2%								98%	

Comment: Tile, 2% Chrysotile. Mastic, NAD.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-54	A0203023-54	Black	Cons.	No	2%								98%	

Comment: Tile, 2% Chrysotile. Mastic, NAD.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-55	A0203023-55	Gray	Layered	No							5%		95%	

Comment: No Asbestos Detected.

Hygeia Project Number: A0203023 **Page:** 12 of 16
Client Project Number/Name: 7454 / Fort Bragg - Building 5517 **Analyzed:** 3/19/2002 by JC

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-56	A0203023-56	Tan	Cons.	No	2%								98%	

Comment: **Tile, 2% Chrysotile. Not enough mastic to analyze.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-57	A0203023-57	White	Cons.	No						60%	5%		35%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-58PR	A0203023-58	White	Fibrous	No	60%					5%			35%	

Comment:

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5514-I-59	A0203023-59	Black	Gummy	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-60	A0203023-60	White	Cons.	No									100%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0203023
Client Project Number/Name: 7454 / Fort Bragg - Building 5517

Analyzed: 3/19/2002 by WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-61	A0203023-61	White	Cons.	No	<1%								100%	

Comment: Tile, NAD. Mastic, 7% Chrysotile.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-62	A0203023-62	White	Cons.	Yes									100%	

Comment: Tile, NAD. Not enough mastic to analyze.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-63	A0203023-63	Black	Cons.	Yes									100%	

Comment: Tile, NAD. Not enough mastic to analyze.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-64	A0203023-64	Black	Cons.	Yes									100%	

Comment: Tile and mastic, NAD.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-65	A0203023-65	Green	Cons.	Yes						30%			70%	

Comment: Tile and mastic, NAD.

Hygeia Project Number: A0203023
Client Project Number/Name: 7454 / Fort Bragg - Building 5517

Analyzed: 3/19/2002 by WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-66	A0203023-66	Brown	Cons.	Yes						20%			80%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-67	A0203023-67	Brown	Cons.	Yes						40%			60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-68	A0203023-68	Pink	Cons.	No	3%						37%		60%	

Comment:

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-69	A0203023-69	Black	Cons.	No	3%								97%	

Comment: Tile, 3% Chrysotile. Mastic, NAD.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-70	A0203023-70	Gray	Cons.	Yes	25%					10%			65%	

Comment:

Hygeia Project Number: A0203023 **Page:** 15 of 16
Client Project Number/Name: 7454 / Fort Bragg - Building 5517 **Analyzed:** 3/19/2002 by CC

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-71	A0203023-71	Gray	Powdery	Yes	2%					18%			80%	

Comment: No drywall layer present. No "popcorn" layer present.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-72	A0203023-72	Green	Powdery	No						20%			80%	

Comment: Drywall and "popcorn" layer, NAD. No joint compound present.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-73	A0203023-73	Green	Powdery	No						10%			90%	

Comment: Drywall and grey "popcorn" layer, NAD. No joint compound present.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-74	A0203023-74	Gray	Powdery	Yes						10%			90%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-75	A0203023-75	Gray	Powdery	Yes						10%			90%	

Comment: No Asbestos Detected.

Hygeia Project Number: A0203023 **Page:** 16 of 16
Client Project Number/Name: 7454 / Fort Bragg - Building 5517 **Analyzed:** 3/19/2002 by CC

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-76	A0203023-76	Brown	Fibrous	Yes						95%			5%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-77	A0203023-77	Gray	Powdery	No	<1%					20%			80%	

Comment: **Drywall and "popcorn" layer, NAD. Joint compound, 2% Chrysotile.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5517-I-78	A0203023-78	Gray	Powdery	Yes						20%			80%	

Comment: **Joint compound, NAD. No drywall present.**

abbreviations:

Chr. = chrysotile	cell = cellulose	per = perlite	OF = Other Fibers
Am. = amosite	glass = fibrous glass	ver = vermiculite	ONF = Other Non-Fibers
Cro. = crocidolite	syn = synthetic	MF = Mineral filler	Cons = Consolidated
An. = anthophyllite	sty = styrene foam	B/F = Binder / filler	
T/A = tremolite/actinolite	det = detected	**NAD = No asbestos detected**	

Hygeia Laboratories Inc.
1300 Williams Drive, Suite A
Marietta, GA 30066
(770) 514-6933

3/27/2002

Point Count Summary

Hygeia Project Number: A0203023

Client Project Number/Name: 7454 / Fort Bragg - Building 5517

Client Sample #	Hygeia #	Chryso	Amosite	Crocid	Antho	Trem Actin	Binder Matrix
5517-I-71	A0203023-71	<1%					99.5%

Comments: 2 points counted.

Client Sample #	Hygeia #	Chryso	Amosite	Crocid	Antho	Trem Actin	Binder Matrix
5517-I-77	A0203023-77	<1%					99.25%

Comments: 3 points counted.

Percentages derived by point counting using the folowing formula:
A/400 X 100% Where A = the total asbestos points counted

Detection Limit is 1% total asbestos.

Chain of Custody

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project: **Ft. Bragg Bldg. 5517**	EMU Job No.: 7454
Samplers: Tim Jones, Jack Ford	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS / NOTES
3/12/02	5517-R-1	43432	Roof shingle
3/12/02	5517-R-2	43433	Roofing felt
3/12/02	5517-R-3	43434	Rolled roofing
3/12/02	5517-R-4	43435	Roofing felt
3/12/02	5517-R-5	43436	Roofing cement
3/12/02	5517-R-6	43437	Rolled roofing
3/12/02	5517-R-7	43438	Roofing felt
3/12/02	5517-R-8	43439	Roofing cement
3/12/02	5517-R-9	43440	Roofing cement
3/12/02	5517-R-10	43441	Roofing cement
3/12/02	5517-R-11	43442	Rolled roofing
3/12/02	5517-R-12	43443	Roofing felt
3/12/02	5517-R-13	43444	Roofing cement
3/12/02	5517-R-14	43445	Roof shingle
3/12/02	5517-R-15	43446	Roofing felt
3/12/02	5517-R-16	43447	Roof shingle
3/12/02	5517-R-17	43448	Built up roofing
3/12/02	5517-R-18	43449	Silver flashing cement
3/12/02	5517-R-19	43450	Roof shingle
3/12/02	5517-R-20	43451	Roofing felt
3/12/02	5517-R-21	43452	Rolled roofing
3/12/02	5517-R-22	43453	Roofing felt

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	3-18-02	1205		3-18-02	

Comments:

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project: **Ft. Bragg Bldg. 5517**	EMU Job No.: 7454
Samplers: Tim Jones, Jack Ford	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS / NOTES
3/12/02	5517-R-23	43454	Multi layer roofing
3/12/02	5517-E-24	43455	Window caulking compound
3/12/02	5517-E-25	43456	Window glazing compound
3/12/02	5517-E-26	43457	Felt paper
3/12/02	5517-M-27	43458	Gypsum board wall covering
3/12/02	5517-M-28	43459	Gypsum board wall covering
3/12/02	5517-E-29	43460	Caulking material
3/12/02	5517-1-30	43461	Composite board wall covering
3/12/02	5517-1-31	43462	Cement board wall covering
3/12/02	5517-1-32	43463	Fiberboard wall covering
3/12/02	5517-1-33	43464	Composite board wall covering
3/12/02	5517-1-34	43465	Vinyl floor covering
3/12/02	5517-1-35	43466	Cloth duct tape
3/12/02	5517-1-36	43467	Floor tile
3/12/02	5517-1-37	43468	Cement board ceiling covering
3/12/02	5517-1-38	43469	Gypsum board wall covering
3/12/02	5517-1-39	43470	Ceiling tile
3/12/02	5517-1-40	43471	Heat shield material
3/12/02	5517-1-41	43472	Heat shield material
3/12/02	5517-1-42	43473	Floor tile
3/12/02	5517-1-43	43474	Floor covering
3/12/02	5517-1-44	43475	Floor tile

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	3-18-02	1205		3-18-02	

Comments:

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project: **Ft. Bragg Bldg. 5517**	EMU Job No.: 7454
Samplers: Tim Jones, Jack Ford	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS / NOTES
3/12/02	5517-1-45	43476	Floor tile
3/12/02	5517-1-46	43477	Floor tile
3/12/02	5517-1-47	43478	Ceiling tile
3/12/02	5517-1-48	43479	Textured wall surfacing
3/12/02	5517-1-49	43480	Ceiling tile
3/12/02	5517-1-50	43481	Floor tile
3/12/02	5517-1-51	43482	Ceiling tile
3/12/02	5517-1-52	43483	Floor tile
3/12/02	5517-1-53	43484	Floor tile
3/12/02	5517-1-54	43485	Floor tile
3/12/02	5517-1-55	43486	Textured wall surfacing
3/12/02	5517-1-56	43487	Floor tile
3/12/02	5517-1-57	43488	Ceiling tile
3/12/02	5517-1-58PR	43489	TSI pipe run
3/12/02	5517-1-59	43490	Black surfacing material
3/12/02	5517-1-60	43491	Floor tile
3/12/02	5517-1-61	43492	Floor tile
3/13/02	5517-1-62	43493	Floor tile
3/13/02	5517-1-63	43494	Floor tile
3/13/02	5517-1-64	43495	Floor tile
3/13/02	5517-1-65	43496	Sheet vinyl floor covering
3/13/02	5517-1-66	43497	Gypsum board ceiling covering

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	3-18-02	1205		3-18-02	

Comments:

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project: **Ft. Bragg Bldg. 5517**	EMU Job No.: 7454
Samplers: Tim Jones, Jack Ford	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS / NOTES
3/13/02	5517-1-67	43498	Gypsum board wall covering w texturing
3/13/02	5517-1-68	43499	Ceiling tile
3/13/02	5517-1-69	43500	Floor tile
3/13/02	5517-1-70	43501	Floor covering
3/13/02	5517-1-71	43502	Drywall joint compound w texturing
3/13/02	5517-1-72	43503	Gypsum board wall covering
3/13/02	5517-1-73	43504	Gypsum board wall covering w texturing
3/13/02	5517-1-74	43505	Drywall joint compound
3/13/02	5517-1-75	43506	Gypsum board wall covering
3/13/02	5517-1-76	43507	Fiber board wall covering
3/13/02	5517-1-77	43508	Gypsum board wall covering w texturing
3/13/02	5517-1-78	43509	Drywall joint compound

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	3-18-02	1205		3-18-02	

Comments:

Certifications

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA / AHERA (TSCA Title II) Approved Accreditation
and NESHAP Regulations Training

Asbestos in Buildings: Inspection and Assessment

February 10-12, 1997
Course Date

2360
Certificate Number

February 12, 1997
Examination Date

February 11, 1998
Expiration Date

William H. Spain - Course Director

Rachel G. McCain - Exam Administrator

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation
and NESHAP Regulations Training

Asbestos in Buildings: Inspector Refresher

February 26, 2002
Course Date

7283
Certificate Number

February 26, 2002
Examination Date

February 25, 2003
Expiration Date

Thomas G. Laubenthal - Course Director

Rachel G. McCain - Exam Administrator

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

22 March 2002

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

HYGEIA LABORATORIES, INC.
MARIETTA, GA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

March 31, 2003
Effective through

David F. Alderman
For the National Institute of Standards and Technology

NVLAP Lab Code: 102087-0

NVLAP-01C (11-95)

CESAS-EN-GGe

National Institute of Standards and Technology **NVLAP®** National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Scope of Accreditation

BULK ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 102087-0**

HYGEIA LABORATORIES, INC.
1300 Williams Drive, Suite A
Marietta, GA 30066-6299
Mr. Clayton Call
Phone: 770-514-6933 Fax: 770-514-6966
E-Mail: call67@atc-enviro.com

NVLAP Code	*Designation*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

March 31, 2003
Effective through

David F. Alderman
For the National Institute of Standards and Technology

NVLAP-01S (11-95)

U.S. Army Corps
of Engineers
Savannah District

U.S. ARMY CORPS OF ENGINEERS
ENVIRONMENTAL & MATERIALS UNIT
200 NORTH COBB PARKWAY
BUILDING 400, SUITE 404
MARIETTA, GA 30062

HAZARDOUS MATERIAL REPORT

BUILDING NO. 5517
FORT BRAGG, NORTH CAROLINA

HAZARDOUS MATERIAL REPORT
Ft. BRAGG, NORTH CAROLINA
BUILDING 5517

INTRODUCTION

1. This report documents the hazardous material survey of Building No. 5517 at Ft. Bragg, North Carolina conducted on 12 March 2002 by USACE Savannah District employees Tim Jones and Jack Ford. This survey was conducted in general accordance with the Statement of Services developed by Ray Willingham, USACE Savannah District.

2. The survey consists of a count of florescent and metal halide lights, a search for mercury containing equipment, a search for lead building components, a search for evidence of past or present underground storage tanks and a search for any other hazardous building materials excluding asbestos, which is handled under separate cover.

3. Building No 5517 was built in 1941 and is of wood frame construction with a concrete floor slab on grade. The roof system is wooden framing with wood decking covered by an asphalt shingle roof system. No physical sampling of suspect hazardous components was performed, only a visual counting was performed.

SUMMARY

4. The florescent and metal halide light count results are presented in Table 1.

5. Inspection of the building turned up lead in the plumbing drain and vent piping system and flashing material around piping penetrating the roof. Results are presented in Table 2.

6. One confirmed and several suspected mercury-containing switches were located on the boiler. FIVE suspect mercury-containing thermostats were located in the following areas: Northern Corridor Section, Tech Services Admin Office, Procurement Area Corridor and the east wall of the Warehouse Area.

7. An underground fuel oil storage tank was once installed outside the boiler room. Building employees indicate that it has been removed. Associated vent piping still exists.

8. Refrigerant from three central air conditioning systems should be recovered prior to building demolition. 6 window air conditioning units should be removed and refrigerant recovered prior to demolition.

Prepared by: _____
TIMOTHY A. JONES

Tables

TABLE 1
Ft. BRAGG BLDG. 5517
FLORESCENT LIGHT FIXTURES

AREA IDENTIFICATION	# & TYPE LIGHTS PRESENT	DESCRIPTION OF LIGHTS
Interior	5	2 foot round metal halide fixtures
Interior	13	2 foot square, 2 bulb florescent fixtures
Interior	3	4 foot long, 2 bulb florescent fixtures
Interior	132	4 foot long, 4 bulb florescent fixtures
Interior	22	8 foot long, 2 bulb florescent fixtures

TABLE 2
Ft. BRAGG BLDG. 5517
LEAD BUILDING COMPONENTS

BUILDING COMPONENT	DESCRIPTION	LOCATION	ESTIMATED NUMBER
Hot poured lead pipe joint	In plumbing drainage, waste and vent piping	Restrooms and under slab	100-150
Lead Flashing	On plumbing vent pipe system	Roof	8

Floor Plan
(See separate file, FBR5517HAZ.dgn)

U.S. Army Corps
of Engineers
Savannah District

U.S. ARMY CORPS OF ENGINEERS
ENVIRONMENTAL & MATERIALS UNIT
200 NORTH COBB PARKWAY
BUILDING 400, SUITE 404
MARIETTA, GA 30062

HAZARDOUS BUILDING MATERIAL REPORT

BUILDING NUMBER 5519
FORT BRAGG, NORTH CAROLINA

HAZARDOUS BUILDING MATERIAL REPORT
Ft. BRAGG, NORTH CAROLINA
BUILDING 5519

INTRODUCTION

1. This report documents the hazardous building material survey of Building 5519 associated with the 16th MP Brigade complex project at Ft. Bragg, North Carolina conducted on 13 March 2002 by USACE Savannah District employees Tim Jones and Jack Ford. This survey was conducted in general accordance with the Statement of Services developed by Ray Willingham, USACE Savannah District.

2. The survey consists of a count of florescent and metal halide lights, a search for mercury containing equipment, a search for lead building components, a search for evidence of past or present underground storage tanks and a search for any other hazardous building materials. Additionally, information from an Asbestos Inspection Report submitted by Alpha Environmental Services of Charleston S.C. in 1997 was reviewed and their findings confirmed.

3. Building 5519 was built in 1983 and is used as general-purpose storage. It is constructed of concrete masonry block with a concrete floor slab and a wooden decked and shingle covered roof. No physical samples of suspect hazardous components were taken, only a visual counting was performed.

SUMMARY

4. The florescent and metal halide light count results are presented in Table 1.

5. No lead building components were located in Building 5519.

6. One mercury-containing thermostat was located in Building 5519 on the north wall of an office. See Floor Plan for thermostat approximate location.

7. An above ground liquid propane fuel tank of approximately 200 gallons is located to the southeast of Building 5519. Approximate location is indicated on the Floor Plan.

8. Information contained in the previously indicated Asbestos Report appears to be complete and appropriate. No further sampling appears necessary.

Prepared by: _____
TIMOTHY A. JONES

Tables

TABLE 1
BUILDING 5519
FLORESCENT LIGHT FIXTURES

AREA IDENTIFICATION	# & TYPE LIGHTS PRESENT	DESCRIPTION OF LIGHTS
Interior	4	4 foot long, 4 bulb florescent fixtures
Interior	5	8 foot long, 2 bulb florescent fixtures
Interior	1	4 foot long, 2 bulb florescent fixtures
Interior	4	4 foot long, 4 bulb florescent fixtures uninstalled
Interior	320	4 foot long florescent bulbs uninstalled
Exterior	1	4 foot long, 2 bulb florescent fixtures
Exterior	1	1 foot round metal halide lamp
Interior	20	Uninstalled ballasts for florescent light fixtures in box in warehouse-shop area

Floor Plan
(See file 5519FloorPlan.dgn)

Certifications

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA / AHERA (TSCA Title II) Approved Accreditation
and NESHAP Regulations Training

Asbestos in Buildings: Inspection and Assessment

February 10-12, 1997
Course Date

2360
Certificate Number

February 12, 1997
Examination Date

February 11, 1998
Expiration Date

William H. Spain - Course Director

Rachel G. McCain - Exam Administrator

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation
and NESHAP Regulations Training

Asbestos in Buildings: Inspector Refresher

February 26, 2002
Course Date

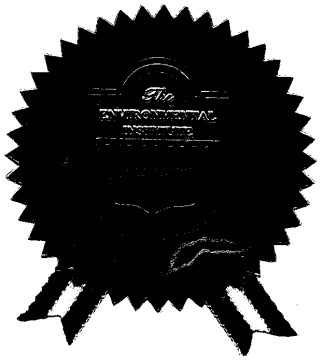
7283
Certificate Number

February 26, 2002
Examination Date

February 25, 2003
Expiration Date

Thomas G. Laubenthal - Course Director

Rachel G. McCain - Exam Administrator



TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

1 April 2002

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

HYGEIA LABORATORIES, INC.

MARIETTA, GA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

March 31, 2003

Effective through

David F. Alderman

For the National Institute of Standards and Technology

NVLAP Lab Code: 102087-0

NVLAP-01C (11-95)

CESAS-EN-GGe

National Institute of Standards and Technology **NVLAP®** National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Scope of Accreditation

BULK ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 102087-0**

HYGEIA LABORATORIES, INC.
1300 Williams Drive, Suite A
Marietta, GA 30066-6299
Mr. Clayton Call
Phone: 770-514-6933 Fax: 770-514-6966
E-Mail: call67@atc-enviro.com

NVLAP Code	*Designation*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

March 31, 2003
Effective through

David F. Alderman
For the National Institute of Standards and Technology

NVLAP-01S (11-95)

U.S. Army Corps
of Engineers
Savannah District

U.S. ARMY CORPS OF ENGINEERS
ENVIRONMENTAL & MATERIALS UNIT
200 NORTH COBB PARKWAY
BUILDING 400, SUITE 404
MARIETTA, GA 30062

ASBESTOS SURVEY

BUILDING NO. 5713
FORT BRAGG, NORTH CAROLINA

ASBESTOS INSPECTION REPORT
FORT BRAGG, NORTH CAROLINA
BUILDING NUMBER 5713

INTRODUCTION

1. This report documents the supplemental asbestos inspection and survey of Building No. 5713 at Fort Bragg, North Carolina conducted on March 13 and 14, 2002 by USACE Savannah District employees Tim Jones and Jack Ford. This survey was conducted to confirm and supplement the survey conducted by HUB Testing Laboratories in 1988. The survey was conducted in general accordance with the regulatory guidelines in the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763 Subpart E Sections 763.80-763.88) and "Guidance for Controlling Asbestos-Containing Materials in Buildings" (Purple Book) (EPA publication number 560/5-85-024). Although not required by the AHERA guidelines, roof and other exterior miscellaneous materials were also inspected and sampled.

2. Building No 5713 was built in 1943 and is largely of wood frame construction with a concrete floor slab on grade and wood roof deck. An addition on the north end is of steel frame construction with concrete block walls and a concrete roof deck. The roof is covered by a single layer rubber membrane roof system. Building 5713 originally housed the post laundry, but has been renovated and now contains a smaller laundry area addition on the north end and a parachute rigging operation on the southern end.

3. All accessible areas of Building No. 5713 were visually inspected for suspected Asbestos Containing Materials (ACM) by an accredited inspector. Bulk samples of all suspected ACM's were collected. Samples were taken from inconspicuous locations when possible. This report details ACM as identified at the time of inspection only.

4. The roof was inspected but no samples were taken. Documentation was located indicating that the old built up roofing membrane was totally removed prior to the installation of the new rubber roof membrane. If older underlying felt and asphalt built up roofing materials are located during demolition they should be analyzed for asbestos prior to removal.

5. The bulk samples were analyzed by Hygeia Laboratories, Inc. Hygeia is accredited by the National Voluntary Laboratory Accredited Program (NVLAP Accreditation sponsored by the National Institute of Standards and Technology (NIST)). The samples were analyzed by the accepted method of polarized light microscopy (PLM) using EPA's "Method for the Determination of Asbestos in Bulk Building Materials", EPA/600/R-93/116. Hygeia's analytical report is

included in Appendix 1 and their NVLAP accreditation is in the Certifications section.

6. In compliance with the AHERA regulations, material is considered an Asbestos Containing Material when it contains greater than 1 (one) percent asbestos. Likewise, in this report, any material containing concentrations greater than 1 percent asbestos will be considered "positive". A narrative discussion of the AHERA ACM types (i.e., thermal systems insulation, miscellaneous and surfacing materials) found in Building No. 5713 is included in this report when relevant. Bulk sample information appears on Table 1. Estimated quantities of individual asbestos containing materials appear on Table 2. Material characterization of samples identified as asbestos containing appears as Table 3. The specific location where each bulk sample was obtained is shown on the building floor plans, which appear as Plates. Positive ACM samples are highlighted on the floor plan Plates and, where possible, locations of similar positive ACM are identified. It is reasonable to assume that all materials similar to those testing positive, also contain positive amounts of asbestos and should be treated as such.

DISCUSSION

7. **Thermal Systems Insulation (TSI)** – TSI is insulation material applied to pipes, fittings, boilers, tanks, ducts, or to other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes (Refer to Tables 1-3 and Plates 2, 3 and 5 for specific information and sample locations).

   The inspector from HUB Testing Laboratories identified 3" and 4" corrugated paper type insulation on a domestic water pipe in the laundry area as being asbestos containing and this report assumes that material to contain asbestos and locates it on plate 5. Samples were taken for this report from insulation on domestic water piping in the parachute rigging area, insulation on steam piping throughout the building and from insulation on the roof drain piping system in the parachute rigging area. These three systems utilized fiberglass insulation for the pipe runs and some fittings while many of the fittings and patch areas were made of troweled on cementous material. All samples of these insulation components were found to be non-asbestos containing material.

8. **Miscellaneous Materials** – Miscellaneous materials include building material on structural components, structural members or fixtures, such as floor and ceiling tiles, and do not include surfacing or TSI.

In the past, there were a great number of miscellaneous building materials that had asbestos fibers added to them during the manufacturing process to increase durability and fireproofing qualities. The following suspect miscellaneous materials were sampled at Building No. 5713 and found to contain asbestos.

Floor Materials – (Refer to Tables 1-3 and Plates 4 and 5 for specific information and sample locations).

9" X 9" green floor tile located in the laundry office, storerooms and laundry pick up area contains asbestos as does the mastic associated with it.

Summary

9. In summary, the following materials in building 5713 were found to contain or are assumed to contain asbestos:

   9" X 9" green floor tiles and their mastic contain asbestos (see floor plan for location).

   TSI pipe insulation on domestic water piping identified in previous inspection contains asbestos (see floor plan for location).
   .

Prepared by: _____
TIMOTHY A. JONES

Tables

Table 1 Suspect ACM Samples
Table 2 ACM Quantity Summary
Table 3 Material Characterization and Assessment

SUSPECT ACM SAMPLES

FIELD ID	DESCRIPTION	LOCATION	ASBESTOS TYPE(%)
5713-1-1	**9" x 9" green floor tile**	**Laundry office and pick up area**	**12% chrysotile in tile , 5% chrysotile in mastic**
5713-1-2	Black rolled floor covering	Laundry storage, shipping & receiving	None
5713-1-3	Gypsum wall board	Laundry storage, shipping & receiving	None
5713-1-4	Felt paper	Behind siding on clear story on roof	None
5713-1-5PT	TSI troweled on pipe tee, 4"	Steam line, parachute rigging area	None
5713-1-6PE	TSI troweled on pipe elbow, 4"	Steam line, parachute rigging area	None
5713-1-7PE	TSI troweled on pipe elbow, 10"	Steam line, parachute rigging area	None
5713-1-8PH	TSI troweled on material at pipe hanger	Steam line, parachute rigging area	None
5713-1-9PE	TSI troweled on pipe elbow, 4"	Steam line, parachute rigging area	None
5713-1-10PR	TSI pipe run, cloth wrapped, 8"	Steam line, parachute rigging area	None
5713-1-11PH	TSI troweled on material at pipe hanger	Steam line, parachute rigging area	None
5713-1-12PE	TSI troweled on pipe elbow, 4", cloth wrapped	Steam line, parachute rigging area	<1% chrysotile
5713-1-13PE	TSI troweled on pipe elbow, 8"	Roof drain line, parachute rigging area	<1% chrysotile
5713-1-14	Felt paper	Between exterior siding and wood wall framing studs	None
5713-1-15PR	TSI foil backed fiberglass pipe run	Roof drain line, parachute rigging area	None
5713-1-16PT	TSI troweled on pipe tee, 10"	Roof drain line, parachute rigging area	None
5713-1-17PE	TSI troweled on pipe elbow, 8"	Roof drain line, parachute rigging area	None
5713-1-18PR	TSI foil backed fiberglass pipe run	Roof drain line, parachute rigging area	None
5713-1-19PE	TSI cloth and mastic covering elbow	Abandoned domestic water line, parachute rigging area	None
5713-1-20	Gypsum board ceiling material	Parachute rigging area	None
5713-1-21	Drywall joint compound	Parachute rigging area, east wall	None

SUSPECT ACM SAMPLES

FIELD ID	DESCRIPTION	LOCATION	ASBESTOS TYPE(%)
5713-1-22	Gypsum board wall covering	Parachute rigging area, east wall	None
5713-1-23PC	TSI troweled on pipe cap	Abandoned domestic water line, parachute rigging area	None
5713-1-24PE	TSI troweled on cloth wrapped pipe elbow, 10"	Abandoned domestic water line, parachute rigging area	None
5713-1-25PE	TSI troweled on cloth wrapped pipe elbow, 12"	Abandoned domestic water line, parachute rigging area	None
5713-1-26	Drywall joint compound	Parachute rigging area, west wall	None
5713-1-27	Gypsum board wall covering	Parachute rigging area, west wall	None
5713-1-28	Gypsum board ceiling material	Parachute rigging area	None
5713-1-29	Gypsum board wall covering and joint compound	Parachute rigging office area	None

TABLE 2

ACM QUANTITY SUMMARY
Ft. Bragg Building 5713

Material Descriptions	Units	Area Descriptions													
		Storerooms	Office	Laundry Drop Off Area	Small Restroom	Large Restroom	Lounge								Total
Floor covering 9" X 9" Green Floor Tile	S.F.	300	300	1700											2300
TSI Pipe Run 3" & 4"" OD	L.F.	25			25	80	5								135

S.F. = Square Foot L.F. = Linear Foot Ea. = Each (Revised by Amendment No. 0005)

All values are estimates

MATERIAL CHARACTERIZATION AND ASSESSMENT
BUILDING 5713 Ft. BRAGG NORTH CAROLINA

MATERIAL		CHARACTERISTICS			ASSESSMENT	
Type	**Description**	**Asbestos yes/no/ assumed**	**Quantity (If ACM)**	**Friable Non-Friable**	**Condition**	**Disturbance Potential**
Miscellaneous	9" X 9" floor tile and mastic	Yes 5-12%	2300	Non-friable	Damaged	Potential damage from foot traffic, moving equipment ect.
TSI	TSI pipe run insulation	Assumed	135 L.F.	Friable	Damaged	Low potential for disturbance

S.F. = Square Foot L.F. = Linear Foot Ea. = Each (Revised by Amendment No. 0005)

Plates

(See Contract Drawings)

Plate 1	FBr5713a.dgn	Room designations
Plate 2	FBr5713c.dgn	Steam piping TSI sample locations
Plate 3	FBr5713e.dgn	Roof drain piping and abandoned domestic water piping TSI sample locations
Plate 4	FB5713d.dgn	Miscellaneous sample locations
Plate 5	FBr5713b.dgn	Asbestos containing materials locations

Appendix 1

HYGEIA LABORATORIES, INC.
1300 Williams Drive, Suite A - Marietta, Georgia 30066-6299 - (770) 514-6933, FAX (770) 514-6966

US Army Corp of Engineers
Environmental & Materials Unit
200 North Cobb Parkway
Bldg. 400, Ste. 404
Marietta, GA 30062

3/25/2002

Subject:
Hygeia Project Number: A0203011
Client Project Number/Name: 7453 /Fort Bragg - Building 5713

Dear Mr. Tim Jones:

Enclosed are the analytical results of bulk samples submitted by you to this laboratory on 3/18/2002. All analyses were performed by polarized light microscopy (PLM) in accordance with the EPA method as defined in Perkins and Harvey, July 1993, "Methods for the Determination of Asbestos in Bulk Materials" 61pp. (EPA/600/R-93/116). The reported percentages are volume estimates obtained by calibrated visual estimation. The results in this report apply only to the items tested.

The EPA defines an asbestos containing material (ACM) as a material that is reported to contain greater than one percent asbestos. HYGEIA is only responsible for the accuracy of the analytical results provided in this report and cannot be held responsible for the errors resulting from improper sample collection techniques. This report may not be used to claim product endorsement by NVLAP or any other U.S. Government agency.

For nonhomogeneous samples, each layer was analyzed separately and the results combined to form the reported value except where otherwise noted. Vinyl floor tile samples with negative results by PLM should be submitted for confirmation by transmission electron microscopy (TEM). Friable samples containing less than 10% asbestos as determined by PLM may be resubmitted for point counting at your discretion.

Thank you for using our analytical services. HYGEIA Laboratories has been NVLAP accredited since 1988. Our current NVLAP code is 102087-0. We will keep a copy of this report on file for three years. We will dispose of your samples in 60 days unless you request that we return them. This report my be reproduced only in its entirety with the consent of Hygeia Laboratories, Inc. If you have any questions, please call us at (770) - 514-6933.

Sincerely,

Clayton Call
Asbestos Laboratory Manager

NVLAP# 102087-0
Texas Dept. of Health # 30-0232
Commonwealth of Virginia # 3333-000210

Hygeia Laboratories Inc.
1300 Williams Drive, Suite A
Marietta, GA 30066
(770) 514-6933

PLM Analysis Summary

Hygeia Project Number: A0203011

Client Project Number/Name: 7453 / Fort Bragg - Building 5713

Analyzed: 3/19/2002 by WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-1	A0203011-01	Green	Cons.	No	12%								88%	

Comment: **Tile: 12% Chrysotile. Mastic: 5% Chrysotile.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-2	A0203011-02	Black	Gummy	Yes						10%			90%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-3	A0203011-03	White	Cons.	Yes						20%			80%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-4	A0203011-04	Brown	Fibrous	No						80%			20%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-5PT	A0203011-05	Tan	Fibrous	Yes						30%	40%		30%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0203011
Client Project Number/Name: 7453 / Fort Bragg - Building 5713

Analyzed: 3/19/2002 by WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-6PE	A0203011-06	Gray	Fibrous	Yes							40%		60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-7PE	A0203011-07	Gray	Fibrous	Yes							40%		60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-8PH	A0203011-08	Gray	Fibrous	Yes						30%	40%		30%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-9PE	A0203011-09	Gray	Fibrous	Yes						30%	40%		30%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-10PR	A0203011-10	Multi	Fibrous	No							95%		5%	

Comment: No Asbestos Detected.

Hygeia Project Number: A0203011
Client Project Number/Name: 7453 / Fort Bragg - Building 5713

Analyzed: 3/19/2002 by WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-11PH	A0203011-11	Gray	Fibrous	Yes							40%		60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-12PE	A0203011-12	Green	Fibrous	Yes	<1%						40%		60%	

Comment:

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-13PE	A0203011-13	Gray	Fibrous	Yes	<1%						40%		60%	

Comment:

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-14	A0203011-14	Brown	Fibrous	Yes						70%			30%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-15PR	A0203011-15	Gray	Fibrous	Yes							80%		20%	

Comment: No Asbestos Detected.

Hygeia Project Number: A0203011
Client Project Number/Name: 7453 / Fort Bragg - Building 5713

Analyzed: 3/19/2002 by WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-16PT	A0203011-16	Gray	Fibrous	No							40%		60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-17PE	A0203011-17	Gray	Fibrous	No							40%		60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-18PR	A0203011-18	Multi	Fibrous	Yes							80%		20%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-19PE	A0203011-19	Multi	Cons.	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-20	A0203011-20	White	Cons.	Yes						30%			70%	

Comment: No Asbestos Detected.

Hygeia Project Number: A0203011
Client Project Number/Name: 7453 / Fort Bragg - Building 5713

Analyzed: 3/19/2002 by WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-21	A0203011-21	White	Cons.	Yes						20%			80%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-22	A0203011-22	White	Cons.	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-23PC	A0203011-23	Gray	Fibrous	Yes							40%		60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-24PE	A0203011-24	Gray	Fibrous	No									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-25PE	A0203011-25	Gray	Fibrous	No							30%		70%	

Comment: No Asbestos Detected.

Hygeia Project Number: A0203011
Client Project Number/Name: 7453 / Fort Bragg - Building 5713

Analyzed: 3/19/2002 by WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-26	A0203011-26	White	Cons.	No									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-27	A0203011-27	White	Cons.	No									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-28	A0203011-28	White	Cons.	No						20%			80%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
5713-1-29	A0203011-29	White	Cons.	No						40%			60%	

Comment: **No Asbestos Detected.**

abbreviations:

Chr. = chrysotile
Am. = amosite
Cro. = crocidolite
An. = anthophyllite
T/A = tremolite/actinolite

cell = cellulose
glass = fibrous glass
syn = synthetic
sty = styrene foam
det = detected

per = perlite
ver = vermiculite
MF = Mineral filler
B/F = Binder / filler
NAD = No asbestos detected

OF = Other Fibers
ONF = Other Non-Fibers
Cons = Consolidated

Chain of Custody

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project: **Ft. Bragg Bldg. 5713**	EMU Job No.: 7453
Samplers: Tim Jones, Jack Ford	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS / NOTES
3/13/02	5713.1.1	43403	Green 9X9 floor tile
3/13/02	5713.1.2	43404	Black rolled floor covering
3/13/02	5713.1.3	40405	Gypsum board wall covering
3/13/02	5713.1.4	43406	Felt paper
3/14/02	5713.1.5PT	43407	TSI troweled tee
3/14/02	5713.1.6PE	43408	TSI troweled elbow
3/14/02	5713.1.7PE	43409	TSI troweled elbow
3/14/02	5713.1.8PH	43410	TSI troweled hanger
3/14/02	5713.1.9PE	43411	TSI troweled elbow
3/14/02	5713.1.10PR	43412	TSI cloth wrapped pipe run
3/14/02	5713.1.11PH	43413	TSI troweled hanger
3/14/02	5713.1.12PE	43414	TSI troweled elbow
3/14/02	5713.1.13PE	43415	TSI troweled elbow
3/14/02	5713.1.14	43416	Felt paper
3/14/02	5713.1.15PR	43417	TSI foil backed pipe run
3/14/02	5713.1.16PT	43418	TSI troweled tee
3/14/02	5713.1.17PE	43419	TSI troweled elbow
3/14/02	5713.1.18PR	43420	TSI foil backed pipe run
3/14/02	5713.1.19PE	43421	TSI white cloth and mastic elbow covering
3/14/02	5713.1.20	43422	Gypsum board ceiling covering
3/14/02	5713.1.21	43423	Drywall joint compound
3/14/02	5713.1.22	43424	Gypsum board wall covering

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	3-18-02	1205			

Comments:

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project: **Ft. Bragg Bldg. 5713**	EMU Job No.: 7453
Samplers: Tim Jones, Jack Ford	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS / NOTES
3/14/02	5713.1.23PC	43425	TSI troweled end cap
3/14/02	5713.1.24PE	43426	TSI troweled elbow
3/14/02	5713.1.25PE	43427	TSI troweled elbow
3/14/02	5713.1.26	43428	Drywall joint compound
3/14/02	5713.1.27	43429	Gypsum board wall covering
3/14/02	5713.1.28	43430	Gypsum board ceiling covering
3/14/02	5713.1.29	43431	Gypsum board wall covering and joint mud

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	3-18-02	1205			

Comments:

Certifications

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA / AHERA (TSCA Title II) Approved Accreditation
and NESHAP Regulations Training

Asbestos in Buildings: Inspection and Assessment

February 10-12, 1997
Course Date

2360
Certificate Number

February 12, 1997
Examination Date

February 11, 1998
Expiration Date

William H. Spain - Course Director

Rachel G. McCain - Exam Administrator

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation
and NESHAP Regulations Training

Asbestos in Buildings: Inspector Refresher

February 26, 2002
Course Date

7283
Certificate Number

February 26, 2002
Examination Date

February 25, 2003
Expiration Date

Thomas G. Laubenthal - Course Director

Rachel G. McCain - Exam Administrator

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

27 March 2002

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

HYGEIA LABORATORIES, INC.

MARIETTA, GA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

March 31, 2003

Effective through

David F. Alderman

For the National Institute of Standards and Technology

NVLAP Lab Code: 102087-0

NVLAP-01C (11-95)

CESAS-EN-GGe

National Institute of Standards and Technology NVLAP® National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Scope of Accreditation

BULK ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 102087-0**

HYGEIA LABORATORIES, INC.
1300 Williams Drive, Suite A
Marietta, GA 30066-6299
Mr. Clayton Call
Phone: 770-514-6933 Fax: 770-514-6966
E-Mail: call67@atc-enviro.com

NVLAP Code	*Designation*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

March 31, 2003
Effective through

David F. Alderman
For the National Institute of Standards and Technology

CESAS-EN-GG 09 JULY, 2002
Fife/maf/5671

MEMORANDUM THRU: EN-GG (O'Kelley)
EN-G (Phillips)

FOR: PM-MB (Grainger)

SUBJECT: 16th Military Police Barracks Brigade Complex Transformer Pad PCB Investigation, Old Post Laundry (Bldg. 5713) at Fort Bragg, North Carolina.

Attached are the analytical results for the environmental sampling performed on 18 APR 02 at the subject site. The samples were retrieved utilizing a hand auger. The attachments include a site map with the sampling points indicated and a copy of the laboratory report.

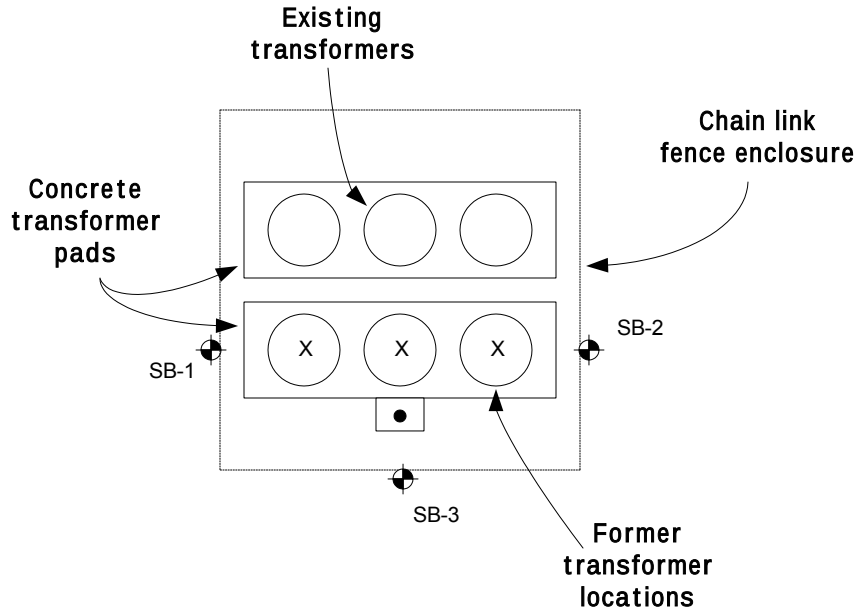
If there are any questions concerning this project, please contact Martin Fife, CESAS EN-GG (912-652-5671).

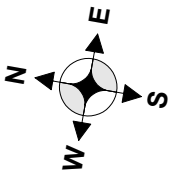
Martin A. Fife, P.G.
Project Scientist
Geology/Hydrogeology and
HTRW Design Section

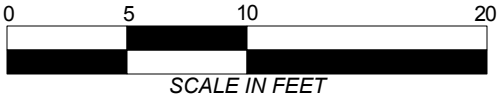
File

U.S. ARMY CORPS OF ENGINEERS GEOLOGY/HYDROGEOLOGY & HTRW DESIGN

BUILDING 5713







U.S. ARMY
FORT BRAGG, NORTH CAROLINA
Building 5713 - Laundry
Electrical Transformers Sampling Map

FT BRAGG\SITE CLEARANCES\16TH MP BARRACKS

ACCURA ANALYTICAL LABORATORY

6017 Financial Drive, Norcross, Georgia, 30071, Phone (770) 449-8800
FL Certification #E87429 NC Certification #483 SC Certification #98015
USACE-MRD Approved

Case Narrative

AAL Work Order # 1883

Client Project: Ft. Bragg , NC; Bldg. 5713 / Credit Card Purchase

The following items were noted concerning this project:

1. Accura Analytical Laboratory certifies that the results meet all requirements of the NELAC Standards.

2. The data package includes 1 page case narrative and 13 summary report pages.

3. The samples were received at 2^0C.

4. The "J" qualifiers noted in these results indicate estimated concentrations that were above the method detection limits, but below the reporting limits.

5. The soil sample results are reported on a dry weight basis.

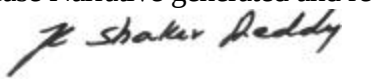
6. The following spike recoveries were outside the method specified limits due to possible matrix interference and/or sample heterogeneity:

   PCB-SW-846-8082
   Matrix Spike - Arochlor 1016 Arochlor 1260
   Matrix Spike Duplicate - Arochlor 1016 Arochlor 1260

   Note: These samples were from AAL batch QC and not from this site.

7. The Method Blanks were less ½ than the reporting limit for the all analyses submitted for this project.

Case Narrative generated and reviewed by:



Shaker J.C. Reddy — 04/26/2002
Shaker J.C. Reddy Date
Lab Director

This report may not be reproduced, except in full, without written approval from Accura Analytical Laboratory, Inc.

A2LA Accredited-ID: 120261 ?Certificate #-1365.1?Exp 7/31/02 Effective 8/14/00?Scope: Testing Technologies
Potable & Non-potable Water-Solid/Hazardous Waste

Analytical Report for

US Army Corp of Engrs, Savann.

Project Name : Fort Bragg, NC Bldg. 5713

Project Manager: Mark Harvison

Lab. Work Order # : 1883
Method: SW8082

April 26, 2002

ACCURA Analytical Laboratories, Inc. - 6017 Financial Drive - Norcross,GA 30071
Phone: 770-449-8800 Fax: 770-449-5477

Summary of Analytical Results

Client ID:		Prep Method:	SW3545	Analytical Method:	SW8082
Sample Depth:		Prep Date:	04/22/02	Date Analyzed:	04/23/02
Sample ID	11550 BLK	Prep Time:	10:30	Time Analyzed:	01:10
Matrix:	SOIL	Prep Chemist:	Evie Goldberg	Analyst:	Thomas Gatch
Date Collected:		Date Received:			

PCBs by SW8082	Result	Rep Limit	Units	Qualifier	Dil.Factor
Aroclor-1016	<R.L.	17	ug/kg	U	1
Aroclor-1221	<R.L.	17	ug/kg	U	1
Aroclor-1232	<R.L.	17	ug/kg	U	1
Aroclor-1242	<R.L.	17	ug/kg	U	1
Aroclor-1248	<R.L.	17	ug/kg	U	1
Aroclor-1254	<R.L.	17	ug/kg	U	1
Aroclor-1260	<R.L.	17	ug/kg	U	1

Summary of Analytical Results

Client ID:	FB-5713-SB1	Prep Method:	SW3545	Analytical Method:	SW8082
Sample Depth:		Prep Date:	04/22/02	Date Analyzed:	04/23/02
Sample ID	1883-001	Prep Time:	10:30	Time Analyzed:	02:18
Matrix:	SOIL	Prep Chemist:	Evie Goldberg	Analyst:	Thomas Gatch
Date Collected:	04/18/2002 09:10	Date Received:	04/19/2002 07:25		

PCBs by SW8082	Result	Rep Limit	Units	Qualifier	Dil.Factor
Aroclor-1016	<R.L.	18	ug/kg	U	1
Aroclor-1221	<R.L.	18	ug/kg	U	1
Aroclor-1232	<R.L.	18	ug/kg	U	1
Aroclor-1242	<R.L.	18	ug/kg	U	1
Aroclor-1248	<R.L.	18	ug/kg	U	1
Aroclor-1254	<R.L.	18	ug/kg	U	1
Aroclor-1260	18	18	ug/kg		1

Summary of Analytical Results

Client ID:	FB-5713-SB2	Prep Method:	SW3545	Analytical Method:	SW8082
Sample Depth:		Prep Date:	04/22/02	Date Analyzed:	04/23/02
Sample ID	1883-002	Prep Time:	10:30	Time Analyzed:	02:51
Matrix:	SOIL	Prep Chemist:	Evie Goldberg	Analyst:	Thomas Gatch
Date Collected:	04/18/2002 09:25	Date Received:	04/19/2002 07:25		

PCBs by SW8082	Result	Rep Limit	Units	Qualifier	Dil.Factor
Aroclor-1016	<R.L.	18	ug/kg	U	1
Aroclor-1221	<R.L.	18	ug/kg	U	1
Aroclor-1232	<R.L.	18	ug/kg	U	1
Aroclor-1242	<R.L.	18	ug/kg	U	1
Aroclor-1248	<R.L.	18	ug/kg	U	1
Aroclor-1254	<R.L.	18	ug/kg	U	1
Aroclor-1260	14	18	ug/kg	J	1

Summary of Analytical Results

Client ID:	FB-5713-SB3	Prep Method:	SW3545	Analytical Method:	SW8082
Sample Depth:		Prep Date:	04/22/02	Date Analyzed:	04/23/02
Sample ID	1883-003	Prep Time:	10:30	Time Analyzed:	03:25
Matrix:	SOIL	Prep Chemist:	Evie Goldberg	Analyst:	Thomas Gatch
Date Collected:	04/18/2002 09:40	Date Received:	04/19/2002 07:25		

PCBs by SW8082	Result	Rep Limit	Units	Qualifier	Dil.Factor
Aroclor-1016	<R.L.	18	ug/kg	U	1
Aroclor-1221	<R.L.	18	ug/kg	U	1
Aroclor-1232	<R.L.	18	ug/kg	U	1
Aroclor-1242	<R.L.	18	ug/kg	U	1
Aroclor-1248	<R.L.	18	ug/kg	U	1
Aroclor-1254	<R.L.	18	ug/kg	U	1
Aroclor-1260	6.4	18	ug/kg	J	1

Analytical Data Package For: US Army Corp of Engrs, Savann.

Project Name : Fort Bragg, NC Bldg. 5713

Client ID	Depth	Accura ID	Mtx	Prep #	Anal #	Received	Collection	Prep Date	Analysis
FB-5713-SB1		1883-001	S	11550	11820	04/19/02	04/18/02	04/22/02	04/23/02
FB-5713-SB2		1883-002	S	11550	11820	04/19/02	04/18/02	04/22/02	04/23/02
FB-5713-SB3		1883-003	S	11550	11820	04/19/02	04/18/02	04/22/02	04/23/02
		11550 BLK	S	11550	11820			04/22/02	04/23/02
		11550 BKS	S	11550	11820			04/22/02	04/23/02

Analytical Report for

US Army Corp of Engrs, Savann.

Project Name : Fort Bragg, NC Bldg. 5713

Project Manager: Mark Harvison

Lab. Work Order # : 1883
Method: CLP_SOLIDS

April 26, 2002

ACCURA Analytical Laboratories, Inc. - 6017 Financial Drive - Norcross,GA 30071
Phone: 770-449-8800 Fax: 770-449-5477

Summary of Analytical Results

Client ID:	FB-5713-SB1	Prep Method:	CLP_SOLIDS	Analytical Method:	CLP_SOLIDS
Sample Depth:		Prep Date:	04/23/02	Date Analyzed:	04/23/02
Sample ID	1883-001	Prep Time:	08:15	Time Analyzed:	08:15
Matrix:	SOIL	Prep Chemist:	Kimbela Cameron	Analyst:	Kimbela Cameron
Date Collected:	04/18/2002 09:10	Date Received:	04/19/2002 07:25		

Percent Solids by CLP	Result	Rep Limit	Units	Qualifier	Dil.Factor
Percent Solids	95	1	%		1

Summary of Analytical Results

Client ID:	FB-5713-SB2	Prep Method:	CLP_SOLIDS	Analytical Method:	CLP_SOLIDS
Sample Depth:		Prep Date:	04/23/02	Date Analyzed:	04/23/02
Sample ID	1883-002	Prep Time:	08:15	Time Analyzed:	08:15
Matrix:	SOIL	Prep Chemist:	Kimbela Cameron	Analyst:	Kimbela Cameron
Date Collected:	04/18/2002 09:25	Date Received:	04/19/2002 07:25		

Percent Solids by CLP	Result	Rep Limit	Units	Qualifier	Dil.Factor
Percent Solids	94	1	%		1

Summary of Analytical Results

Client ID:	FB-5713-SB3	Prep Method:	CLP_SOLIDS	Analytical Method:	CLP_SOLIDS
Sample Depth:		Prep Date:	04/23/02	Date Analyzed:	04/23/02
Sample ID	1883-003	Prep Time:	08:15	Time Analyzed:	08:15
Matrix:	SOIL	Prep Chemist:	Kimbela Cameron	Analyst:	Kimbela Cameron
Date Collected:	04/18/2002 09:40	Date Received:	04/19/2002 07:25		

Percent Solids by CLP	Result	Rep Limit	Units	Qualifier	Dil.Factor
Percent Solids	94	1	%		1

Analytical Data Package For: US Army Corp of Engrs, Savann.

Project Name : Fort Bragg, NC Bldg. 5713

Client ID	Depth	Accura ID	Mtx	Prep #	Anal #	Received	Collection	Prep Date	Analysis
FB-5713-SB1		1883-001	S	11797	11797	04/19/02	04/18/02		04/23/02
FB-5713-SB2		1883-002	S	11797	11797	04/19/02	04/18/02		04/23/02
FB-5713-SB3		1883-003	S	11797	11797	04/19/02	04/18/02		04/23/02

Form 2 - Surrogate Recoveries

Project Name: Fort Bragg, NC Bldg. 5713

Report Date: 04/26/02 15:26

Project ID: Credit Card Purchase

Work Order #: 1883

Lab Batch #: 11820 **Sample:** 11550 BKS / BKS **Batch:** 1 **Matrix:** SOIL

Units: ug/kg **Client-Id:**

SURROGATE RECOVERY STUDY

PCBs by SW8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	16.9	16.7	102	59-175	

Lab Batch #: 11820 **Sample:** 11550 BLK / BLK **Batch:** 1 **Matrix:** SOIL

Units: ug/kg **Client-Id:**

SURROGATE RECOVERY STUDY

PCBs by SW8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	15.1	16.7	90	59-175	

Lab Batch #: 11820 **Sample:** 1883-001 / SMP **Batch:** 1 **Matrix:** SOIL

Units: ug/kg **Client-Id:** FB-5713-SB1

SURROGATE RECOVERY STUDY

PCBs by SW8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	16.7	16.7	100	19-203	

Lab Batch #: 11820 **Sample:** 1883-002 / SMP **Batch:** 1 **Matrix:** SOIL

Units: ug/kg **Client-Id:** FB-5713-SB2

SURROGATE RECOVERY STUDY

PCBs by SW8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	16.9	16.6	102	19-203	

Lab Batch #: 11820 **Sample:** 1883-003 / SMP **Batch:** 1 **Matrix:** SOIL

Units: ug/kg **Client-Id:** FB-5713-SB3

SURROGATE RECOVERY STUDY

PCBs by SW8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	16.9	16.7	102	19-203	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Z = Surrogate Recovery exceeded the Labortatory QC limits

U.S. Army Corps
of Engineers
Savannah District

U.S. ARMY CORPS OF ENGINEERS
ENVIRONMENTAL & MATERIALS UNIT
200 NORTH COBB PARKWAY
BUILDING 400, SUITE 404
MARIETTA, GA 30062

HAZARDOUS MATERIAL REPORT

BUILDING NO. 5713
FORT BRAGG, NORTH CAROLINA

HAZARDOUS MATERIAL REPORT
Ft. BRAGG, NORTH CAROLINA
BUILDING 5713

INTRODUCTION

1. This report documents the hazardous material survey of Building No. 5713 at Ft. Bragg, North Carolina conducted on 14 March 2002 by USACE Savannah District employees Tim Jones and Jack Ford. This survey was conducted in general accordance with the Statement of Services developed by Ray Willingham, USACE Savannah District.

2. The survey consists of a count of florescent and metal halide lights, a search for mercury containing equipment, a search for lead building components, a search for evidence of past or present underground storage tanks and a search for any other hazardous building materials excluding asbestos, which is handled under separate cover.

3. Building No 5713 was built in 1943 and is largely of wood frame construction with a concrete floor slab on grade and wood roof deck. An addition on the north end is of steel frame construction with concrete block walls and a concrete roof deck. The roof is covered by a single layer rubber membrane roof system. No physical sampling of suspect hazardous components was performed, only a visual counting was performed.

SUMMARY

4. The florescent and metal halide light count results are presented in Table 1.

5. Inspection of the building turned up lead in the plumbing drain and vent piping systems. Results are presented in Table 2.

6. Four mercury-containing thermostats were located in the laundry shipping and receiving area mounted to columns in the center of the area.

7. An above ground propane gas storage tank is located on the west side of the building.

8. 12 window air conditioning units should be removed and refrigerant recovered prior to demolition.

Prepared by: _____
TIMOTHY A. JONES

Tables

TABLE 1
Ft. BRAGG BLDG. 5713
FLORESCENT LIGHT FIXTURES

AREA IDENTIFICATION	# & TYPE LIGHTS PRESENT	DESCRIPTION OF LIGHTS
Interior	136	2 foot round metal halide fixtures
Interior	8	Battery backup emergency lights
Interior	132	4 foot long, 2 bulb florescent fixtures
Interior	25	4 foot long, 4 bulb florescent fixtures
Interior	50	8 foot long, 2 bulb florescent fixtures
Exterior	16	1 foot square metal halide lights

TABLE 2
Ft. BRAGG BLDG. 5713
LEAD BUILDING COMPONENTS

BUILDING COMPONENT	DESCRIPTION	LOCATION	ESTIMATED NUMBER
Hot poured lead pipe joint	In plumbing drainage, waste and vent piping	Restrooms and under slab and roof drain piping	300-400

Floor Plan
(See 5713FloorPlan.dgn)

U.S. Army Corps
of Engineers
Savannah District

U.S. ARMY CORPS OF ENGINEERS
ENVIRONMENTAL & MATERIALS UNIT
200 NORTH COBB PARKWAY
BUILDING 400, SUITE 404
MARIETTA, GA 30062

HAZARDOUS BUILDING MATERIAL REPORT

BUILDING NUMBER 5807
FORT BRAGG, NORTH CAROLINA

HAZARDOUS BUILDING MATERIAL REPORT
Ft. BRAGG, NORTH CAROLINA
BUILDING 5807

INTRODUCTION

1. This report documents the hazardous building material survey of Building 5807 associated with the 16th MP Brigade complex project at Ft. Bragg, North Carolina conducted on 13 March 2002 by USACE Savannah District employees Tim Jones and Jack Ford. This survey was conducted in general accordance with the Statement of Services developed by Ray Willingham, USACE Savannah District.

2. The survey consists of a count of florescent and metal halide lights, a search for mercury containing equipment, a search for lead building components, a search for evidence of past or present underground storage tanks and a search for any other hazardous building materials.

3. Building 5807 was reportedly built in 1931 and is used as a general storage building. It is of steel construction with a concrete floor slab. No physical samples of suspect hazardous components were taken, only a visual counting was performed.

SUMMARY

4. The florescent and metal halide light count results are presented in Table 1.

5. No lead building components were located in Building 5807

6. No mercury-containing equipment was located in Building 5807

7. An inspection of Building 5807 turned up no suspect asbestos containing building material and no samples were taken.

8. One 55 gallon drum of Trichloroethylene stored in an over-pack safety drum was located inside Building 5807.

Prepared by: _____
TIMOTHY A. JONES

Tables

TABLE 1
BUILDING 5807
FLORESCENT LIGHT FIXTURES

AREA IDENTIFICATION	# & TYPE LIGHTS PRESENT	DESCRIPTION OF LIGHTS
Interior	14	8 foot long with 4 each 4 foot long bulbs florescent fixtures
Exterior	2	2 foot round metal halide fixtures loose on ground by door

Certifications

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA / AHERA (TSCA Title II) Approved Accreditation
and NESHAP Regulations Training

Asbestos in Buildings: Inspection and Assessment

February 10-12, 1997
Course Date

2360
Certificate Number

February 12, 1997
Examination Date

February 11, 1998
Expiration Date

William H. Spain - Course Director

Rachel G. McCain - Exam Administrator

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation
and NESHAP Regulations Training

Asbestos in Buildings: Inspector Refresher

February 26, 2002
Course Date

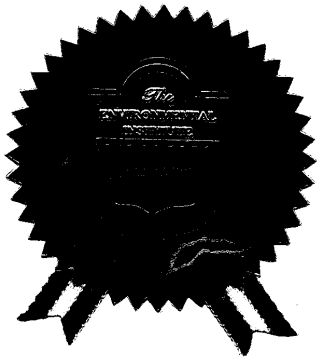
7283
Certificate Number

February 26, 2002
Examination Date

February 25, 2003
Expiration Date

Thomas G. Laubenthal - Course Director

Rachel G. McCain - Exam Administrator



TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

U.S. Army Corps
of Engineers
Savannah District

U.S. ARMY CORPS OF ENGINEERS
ENVIRONMENTAL & MATERIALS UNIT
200 NORTH COBB PARKWAY
BUILDING 400, SUITE 404
MARIETTA, GA 30062

HAZARDOUS BUILDING MATERIAL REPORT

INCLUDING ASBESTOS

UN-NUMBERED STORAGE BUILDING
FORT BRAGG, NORTH CAROLINA

*4

DELETED

(This building has been demolished)

(Revised by Amendment No. 0004)

Asbestos Inspection Report
Fort Bragg, North Carolina

Building No. 2-6105

Summary

Building No. 2-6105 is used as a warehouse. The building is of block construction with a wood rafter, shingled roof and a concrete floor. Suspect material included the roofing material and window putty. No asbestos containing material was found.

Homogeneous Area: H01 Window Putty

Homogeneous area H01 is the window putty used on the windows of the building.

Sample No.	Location	% Asbestos/ Type
2-6105-0101	Window Frame	None Detected
2-6105-0102	Window Frame	None Detected
2-6105-0103	Window Frame	None Detected

Homogeneous Area: H02 Roofing Materials

Homogeneous area H02 is the roof shingles and felt material used on the roof of the building.

Sample No.	Location	% Asbestos/ Type
2-6105-0204	Roof	None Detected
2-6105-0205	Roof	None Detected
2-6105-0206	Roof	None Detected

Westmont, NJ 609-858-4800 | Piscataway, NJ 908-981-0550 | Carle Place, NY 516-997-7251 | Manhattan, NY 212-290-0052 | Seattle, WA 206-233-9007 | Ann Arbor, MI 313-668-6810 | San Mateo, CA 415-570-5401 | Smyrna, GA 404-333-6066 | Greensboro, NC 910-297-1487 | Houston, TX 713-686-3635

EMSL

Alpha Environmental Sciences
400 Dellwood Rd. Bldg.6A Ste 2
P.O.Box 31
Waynesville, NC 28786

Thursday, January 16, 1997

Ref Number: NC97148

POLARIZED LIGHT MICROSCOPY (PLM)

Project: Project No. 6439.01 AI - Bldg.2-6105

SAMPLE	LOCATION	APPEARANCE	SAMPLE TREATMENT	ASBESTOS %	ASBESTOS TYPE	NONASBESTOS %	NONASBESTOS FIBROUS	NONASBESTOS %	NONASBESTOS NONFIBROUS
0101		Grey Non-Fibrous Homogeneous	Teased		None Detected			100%	Other
0102		Grey Non-Fibrous Homogeneous	Teased		None Detected			100%	Other
0103		Grey Non-Fibrous Homogeneous	Teased		None Detected			100%	Other
0204		Grey/Black Fibrous Heterogeneous	Dissolved/Teased		None Detected	60%	Cellulose	40%	Other
0205		Grey/Black Fibrous Heterogeneous	Dissolved/Teased		None Detected	60%	Cellulose	40%	Other
0206		Grey/Black Fibrous Heterogeneous	Dissolved/Teased		None Detected	60%	Cellulose	40%	Other

Comments: For all obviously heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. Also, "# of Layers" refers to number of separable subsamples.

Tom Ferrante
Analyst

R.K. Mahoney
Approved
Signatory

Disclaimers: PLM has been known to miss asbestos in a small percentage of samples which contain asbestos. Thus negative PLM results cannot be guaranteed. Floor tiles and wipes should be tested with either SEM or TEM. The above test report relates only to the items tested. This report may only be reproduced in full with written approval by EMSL. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government. All "NVLAP" reports with NVLAP logo must contain at least one signature to be valid. Laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples.

02089 22